B1

2. (Amended) The method of claim 1, further comprising adjusting a loss characteristic associated with said laser according to said sensed voltage across said gain medium.

B2

5. (Amended) A method for controlling performance of a laser cavity having a beam traveling therethrough, comprising:

(a) sensing voltage across a gain medium emitting said beam; and

(b) determining optical losses associated with said cavity according to said sensed voltage across said gain medium.

6. (Amended) The method of claim 5, further comprising adjusting a loss characteristic of said cavity according to said sensed voltage across said gain medium.

B3

8. (Amended) The method of claim 7, wherein said adjusting said loss element comprises:

(a) introducing a frequency modulation to said loss element; and

(b) deriving an error signal from said sensed voltage across said gain medium, said error signal indicative of propagation characteristics of said frequency modulation.

B4

11. (Amended) The method of claim 7, wherein said adjusting said loss element comprises:

(a) introducing a frequency modulation to a plurality of positional degrees of freedom of said loss element;

(b) deriving an error signal from said sensed voltage across said gain medium, said error signal indicative of propagation characteristics of said frequency modulation to each of said plurality of positional degrees of freedom of said loss element; and

(c) adjusting each of said plurality of positional degrees of freedom of said loss element.

B5

14. (Amended) The method of claim 5, further comprising adjusting a plurality of loss elements associated with said cavity according to said sensed voltage across said gain medium.

B6

17. (Amended) The method of claim 15, wherein said adjusting said loss elements comprises:

(a) sequentially introducing a frequency modulation to each said loss element; and

(b) deriving error signals from said sensed voltage, said error signals indicative of propagation characteristics of each said frequency modulation.

18. (Amended) The method of claim 15, wherein said adjusting said loss elements comprises:

(a) simultaneously introducing a different frequency modulation to each said loss element; and

(b) deriving error signals from said sensed voltage, said error signals indicative of propagation characteristics of each said frequency modulation.

B7

21. (Twice Amended) A laser apparatus, comprising:

(a) a gain medium to emit a coherent beam along an optical path;

(b) a reflector positioned in said optical path and defining a laser cavity;

(c) a voltage sensor operatively coupled to said gain medium to monitor voltage across said gain medium; and

(d) a control system operatively coupled to said voltage sensor and to an optical loss element positioned in said optical path in said cavity, said control system to adjust said optical loss element according to said monitored voltage across said gain medium to reduce optical losses associated with said cavity.

B8

23. (Amended) The apparatus of claim 21, further comprising a dither element operatively coupled to said optical loss element and configured to introduce a frequency

dither to said optical loss element, said frequency dither detectable in said monitored voltage across said gain medium.

24. (Amended) The apparatus of claim 21, wherein said optical loss element comprises said reflector.

25. (Amended) The apparatus of claim 21, further comprising a plurality of dither elements, each said dither element operatively coupled to a corresponding positional degree of freedom of said optical loss element, each said dither element producing a frequency dither detectable in said monitored voltage across said gain medium.

26. (Amended) The apparatus of claim 21, further comprising:

(a) a plurality of optical loss elements positioned in said optical path in said cavity; and

(b) a control system operatively coupled to said voltage detector and each said optical loss element, said control system configured to adjust each said optical loss element according to said monitored voltage across said gain medium.

27. (Amended) The apparatus of claim 26, further comprising a plurality of dither elements, each said dither element operatively coupled to a corresponding one of said optical loss elements and configured to introduce a frequency dither to each said optical loss element, said frequency dither in each said optical loss element detectable in said monitored voltage across said gain medium.